

RECENT PAPERS BEARING ON METEOROLOGY.

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The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

American geographical society. Bulletin. New York. v. 45. February, 1913.

Huntington, Ellsworth. The shifting of climatic zones as illustrated in Mexico. p. 107-116.

Arctowski, Henryk. On some climatic changes recorded in New York City. (Studies on climate and crops: 5) p. 117-131.

American journal of science. New Haven. v. 35. March, 1913.

Bigelow, Frank H. On the coefficients and exponent of the radiation equation, $K_{10} = cT_{10}^a$, in the earth's atmosphere. p. 254-266.

Franklin institute. Journal. Philadelphia. v. 175. March, 1913.

Humphreys, William J[ackson]. On the physics of the atmosphere. p. 207-244.

— Aneroid barometers. p. 329-330. [Investigations at U. S. Bureau of standards.]

International institute of agriculture. Bureau of agricultural intelligence and of plant diseases. Monthly bulletin. Rome. 4th year. January, 1913.

— On the weather conditions that favor the breaking out of vine-mildew. p. 138-142.

Nature. London. v. 90. February 20, 1913.

Barnes, H. T. Iceberg melting. p. 671-673.

Nature. London. v. 91. March 13, 1913.

Goodey, T. Atmospheric electrification during South African dust storms. p. 31-32.

Lockyer, William J. S. International time and weather radiotelegraphic signals. p. 33-36.

Popular science monthly. New York. v. 82. April, 1913.

Ward, Robert DeC. The influence of forests upon climate. p. 313-331.

Royal meteorological society. Quarterly journal. London. v. 39. January, 1913.

Mill, Hugh Robert. Unprecedented rainfall in East Anglia, August 25-26. p. 1-28.

Jenkin, Arthur Pearse. A 3-year period in rainfall. p. 29-41.

Bassett, Henry. Probable utility of salinity observations in the Irish sea for long-date weather-forecasting. p. 43-53.

Anthony, Charles. New form of standard barometer. p. 55-56.

Marriott, W[illiam]. Dr. C. Theodore Williams. 1838-1912. p. 57-59. [Obituary—With portrait.]

Assmann, Richard. Automatic release of self-recording instruments from balloons-sondes. p. 61-62.

Lippincott, R. C. Cann. Green flash. p. 63-65.

Devereux, Humphrey P. The Australian high and the secondary anticyclonic systems. p. 65-68.

Strachan, R. Vapour quality and evaporation. p. 68-69.

Lippincott, R. C. Cann. Goethe's meteorology. p. 69-70.

— Excessive rainfalls. p. 70.

— Mr. Francis S. Granger. p. 71. [Obituary.]

— Mr. R. W. Munro. p. 72. [Obituary.]

Royal society of London. Philosophical transactions. London. Series A. v. 212.

King, Louis Vessot. On the scattering and absorption of light in gaseous media, with applications to the intensity of sky radiation. p. 375-433.

Royal society of London. Proceedings. v. 88. No. A601. 1913.

King, Louis Vessot. On the scattering and absorption of light in gaseous media, with applications to the intensity of sky radiation. (Abstract.) p. 83-89.

Scientific American. New York. v. 108. 1913.

— Atmospheric ozone up to date. p. 110. (Feb. 1.)

— The rise of agricultural meteorology. p. 112. (Feb. 1.)

— Wind-rolled snowballs. p. 196. (Mar. 1.)

— Germany's aeronautical weather bureau. p. 262. (Mar. 22.)

— Stereoscopic views of lightning. p. 265; 275. (Mar. 22.)

Talman, Charles] Fitzhugh. "The snow of the penitents." p. 265-266. (Mar 22.)

Scientific American supplement. New York. v. 75. March 8, 1913.

Bjerknes, Vilhelm. Meteorology as an exact science. Physical laws applied to the study of atmospheric phenomena. p. 147.

Berg, Ernst J. Lightning protection of buildings. The devices must be calculated for high frequency currents. p. 159-160. [Abstract from Engineering news.]

Symons's meteorological magazine. London. v. 48. February, 1913.

Mossman, R. C. Southern hemisphere seasonal correlations. p. 2-6.

— Charles Theodore Williams, M. D., M. V. O. August 29th, 1838-December 15th, 1912. p. 11. [Obituary.]

— Léon Philippe Teisserenc de Bort. November 5th, 1855-January, 1913. p. 11-12. [Obituary.]

Académie des sciences. Comptes rendus. Paris. tome 156. 3 mars 1913.

Maurice, H. Sur les résultats donnés par les ballons-sondes au nord du cercle polaire. p. 738-741.

Archives des sciences physiques et naturelles. Genève. tome 35. 15 février 1913.

Heim, Albert. Les couleurs de l'atmosphère. p. 173-183. [Extract and translation from a book by Heim.]

Ciel et terre. Bruxelles. 34 année. Février 1913.

Silva, Giovanni. L'aréobarographe de l'Observatoire de Padoue. p. 56-63.

Cosmos. Paris. 62 année. 6 mars 1913.

— Le ballon-sonde monté à 37700 mètres. p. 254.

Nodon, A. Recherches sur les causes des perturbations de l'atmosphère. p. 268-271.

Hérault. Commission météorologique. Bulletin. Montpellier. 1911.

Rey, Pierre. Sur le nombre de journées de grande chaleur à Montpellier (Période 1880-1911). p. 51-53.

Rey, Pierre. Sur les températures extrêmes observées à Montpellier (Période 1873-1911). p. 53-54.

Moye, Marcel. Les types du temps dans le bassin de la Méditerranée occidentale. p. 57-72.

Moye, Marcel. Les nuages et la climatologie de l'Hérault. p. 73-77.

— Sur l'organisation d'un service général de météorologie agricole. p. 79-92.

Nature. Paris. 21 année. 1 mars. 1913.

Duroquier, Franck. La télégraphie sans fil et la prévision du temps. p. 218-219. [Suggests study of parasitic signals in radiotelegraphy as an aid in forecasting.]

Radium. Paris. tome 10. January 1913.

Chauveau, A. Benjamin. L'ionisation de l'air en vase clos et la radiation pénétrante. p. 17-24.

Société météorologique de France. Annuaire. Paris. 60 année. 1912.

Chauveau, A. Benjamin. L'ionisation de l'air en vase clos et la radiation pénétrante. p. 249-278. (Oct.-nov.)

Rey, J. Sur la loi de Mairan relative aux aurores polaires. p. 293-295. (Déc.)

Dongier, R. L'œuvre météorologique de Bernard Brunhes. p. 296-302. (Déc.)

Société météorologique de France. Annuaire. Paris. 61 année. Janvier 1913.

Danne, G. Sur un appareil universel pour les mesures radioactives appliquée aux mesures d'électricité atmosphérique. p. 11-23.

Technique aéronautique. Paris. tome 7. 15 février 1913.

Bernard, Paul. L'œuvre de M. Léon Teisserenc de Bort. p. 97-110.

Beiträge zur Geophysik. Leipzig. 12. Band. 2. Heft. 1913.

Wagner, Gotthold. Der Einfluss des Mondes auf das Wetter. p. 277-328.

Deutsche Luftfahrt Zeitschrift. Berlin. 17. Jahrgang. 5. März 1913.

Berson, Arthur. Léon Teisserenc de Bort. p. 120-121.

Kaiserliche Akademie der Wissenschaften. Sitzungsbericht. Wien. 121. Band. 1912.

Ficker, Heinrich] v. Föhnhuntersuchungen im Ballon. p. 820-875. (Mai.)

Brommer, Alois. Luftelektrische Messungen während der partiellen Sonnenfinsternis am 17. April 1912. p. 985-995. (Juni)

Meteorologische Zeitschrift. Braunschweig. Band 30. February 1913.

Braak, Cornelis. Über die Ursache langperiodischer Barometer- und Temperaturschwankungen. p. 49-58.

Defant, A. Die Veränderungen in der allgemeinen Zirkulation der Atmosphäre in den gemäßigten Breiten der Erde. p. 58-66.

Bjerknes, Vilhelm. Das CGS System und die Meteorologie. p. 67-71.

Dorno, C. Beobachtungen der neutralen Punkte der atmosphärischen Polarisation. Angestellt in Davos Oktober 1911 bis Mai 1912 und September bis Oktober 1912. p. 71-80.

Jensen, Christian. Zur Frage der grossen atmosphärisch-optischen Störung. p. 81-85.

Maurer, J. Trübung der Atmosphäre 1912. p. 92-93.

Möller, Max. Zum täglichen Gang der Windstärke hoher Luftsichten und dessen ursächliche Erforschung. p. 93-95.

- Sapper, K[arl].** Regenmessungen an der pazifischen Abdachung der Republik Guatemala 1911. p. 95-96.
- Meyer, G.** Über den Einfluss der Mondperioden auf Temperaturschwankungen. p. 97-98.
- Bemmelen, W. van.** Der mondtägliche Variation des Luftdruckes in Batavia. p. 98-99.
- Hann, J[ulius] v.** Die adiabatische Temperaturaufnahme mit der Höhe. p. 99-101.
- Maurer, J.** Über die Verdunstung auf einzelnen Seen am nordalpinen Fuss. 102-104.
- Alt, E[ugen].** Frostgrenzen und Frosthäufigkeit in Süddeutschland. p. 104-106.
- Knoche, W[alter].** Der grosse Juni-Schneefall 1912 im chilenischen Längstal. (Vorläufige Mitteilung.) p. 106-108.
- Billwiller, R.** Die Schwächung von Sonnenstrahlung und Sonnenschein dauer durch die atmosphärische Trübung im Sommer 1912. p. 108-109.
- Mitteilungen aus den deutschen Schutzgebieten.* Berlin. 25. Band. 4. Heft. 1912.
- Marquardsen, H[ugo].** Bericht über das meteorologische Beobachtungswesen in Kamerun im Jahre 1911. p. 319-330.
- Marquardsen, H[ugo].** Bericht über das meteorologische Beobachtungswesen im Schutzgebiet Deutsch-Neuguinea im Jahre 1911. p. 332-337.
- Oesterreichische Flug-Zeitschrift.* Wien. 7 Jahrgang. 25. Februar 1913.
- Borne, Georg v. d.** Aneroidvariometer zur Feststellung der Vertikalgeschwindigkeit im Freiballon. p. 91-92.
- Physikalische Zeitschrift.* Leipzig. 14. Jahrgang. 15. Februar 1913.
- Gilchrist, L.** Eine absolute Bestimmung der inneren Reibung der Luft. p. 160-165.
- Weltall, Berlin.* 13. Jahrgang. 2. Dezember-Heft. 1912.
- Weinek, L[adislau].** Über die Dauer der Dämmerung und des Auf bzw. Unterganges der Sonnen- oder Mondscheibe. p. 88-93.
- Zeitschrift für Balneologie.* Berlin. 5. Jahrgang. 15. Januar 1913.
- Parkas, Martin.** Weitere Beiträge zum Wetterfühlen. p. 603-607; 633-636.
- Nuovo cimento.* Pisa. anno 59. Gennaio 1913.
- Occhialini, A., & Bodareu, E.** La costante dielettrica dell'aria fino a 200 atmosfera. p. 15-40.
- Società meteorologica italiana. Bollettino bimensuale.* Torino. ser. 3, v. 31. Agosto-settembre 1912.
- I fenomeni meteorici studiati nell'Osservatorio di Valle di Pompei durante l'eclissi solare del 17 aprile 1912. p. 33-34.
- Gentile, Carlo, & Parodi, Roberto.** Per lo studio delle correnti elettrotelluriche. p. 34-37.

METEOROLOGICAL OBSERVATIONS AT THE UNIVERSITY OF CALIFORNIA.

In a pamphlet recently issued by the University of California, Mr. William G. Reed, instructor in climatology in that institution, gives an interesting description of the work in meteorology carried on there for the past 26 years.

All scientific work of real value requires painstaking care, often spread out over a long period of years. As the author of this pamphlet well says: "There is, perhaps, no type of work in which so much depends upon the daily exacting attention to detail as meteorology. An observation missed in this work is lost forever; an approximate figure may be obtained and used in the preparation of the averages, but the greatest value of meteorological work depends upon an unbroken and regular series of observations." That the University of California has recognized the value of such attention to details is evidenced by the fact that it has maintained, through the hearty cooperation and interest of its instructors and students, an uninterrupted record of meteorological observations from October 16, 1886, to the present time.

The first regular observations at the university were begun in 1886, and maintained tri-daily until September 1, 1892. Since the latter date they have been made twice daily, namely, at 8 a. m., and 8 p. m., Pacific time. The transfer of the national meteorological work from the Signal Service to the United States Weather Bureau October 1, 1891, was done without involving any break in the continuity of the records.

A synopsis of the results of 25 years of meteorological observations has been prepared by Prof. Leuschner, Director of the Students' Observatory, and will shortly be issued as one of the publications of the series in Geography recently established by the editorial committee of the university.